

Contribution to the Development of Chile

The Chilean Navy carries out a valuable contribution to the development of the country through its means in all the national territory and, as a whole, with other state institutions.

Some of these activities are:

- Safety on beaches and bathing resorts
- Assistance to extreme or isolated zones
- Medical Assistance Transport
- Safety In ports
- Alarm system for tidal waves
- Weather forecast
- Maritime Search and Rescue
- Maritime Instruction and Training
- Maritime aids to navigation
- Nautical Cartography
- Time signal

Furthermore, the Chilean Navy carries out a permanent contribution to the development of the country in collaboration with other state organizations as follows:

- **Supervision of Fishing**
(National Fishing Service)
- **Control of Smuggling**
(National Customs Service)
- **Control of Traffic in narcotics**
(Police Forces)
- **Assistance to the Community**
(Regional Governments)
- **Aquiculture concessions**
(Under-Secretary of the Navy)
- **Maritime Scientific Research**
(Chilean Antarctic Institute and Universities)

Energy for the Future Gas Hydrates

One of the most valuable results obtained by work carried out by the Chilean Navy and civilian organizations, working together, was the discovery of extensive deposits of underwater gas hydrates along the coasts of Southern Chile, which represent a new source of energy for the future.

This discovery was the result of work started in 2001, as part of the project "Underwater Gas Hydrates: A New Source of Energy for the twenty-first century", which was financed by FONDEF (Foundation for Scientific Development and Technology in Chile) for the years, 2002 and 2003, led by the Pontifical Catholic University of Valparaíso.

This project also includes the participation of the University of Concepción, the Naval Research Laboratory (NRL) of the United States Maritime Department, the Hydrographic and Oceanographic Service of the Chilean Navy and European Institutions.

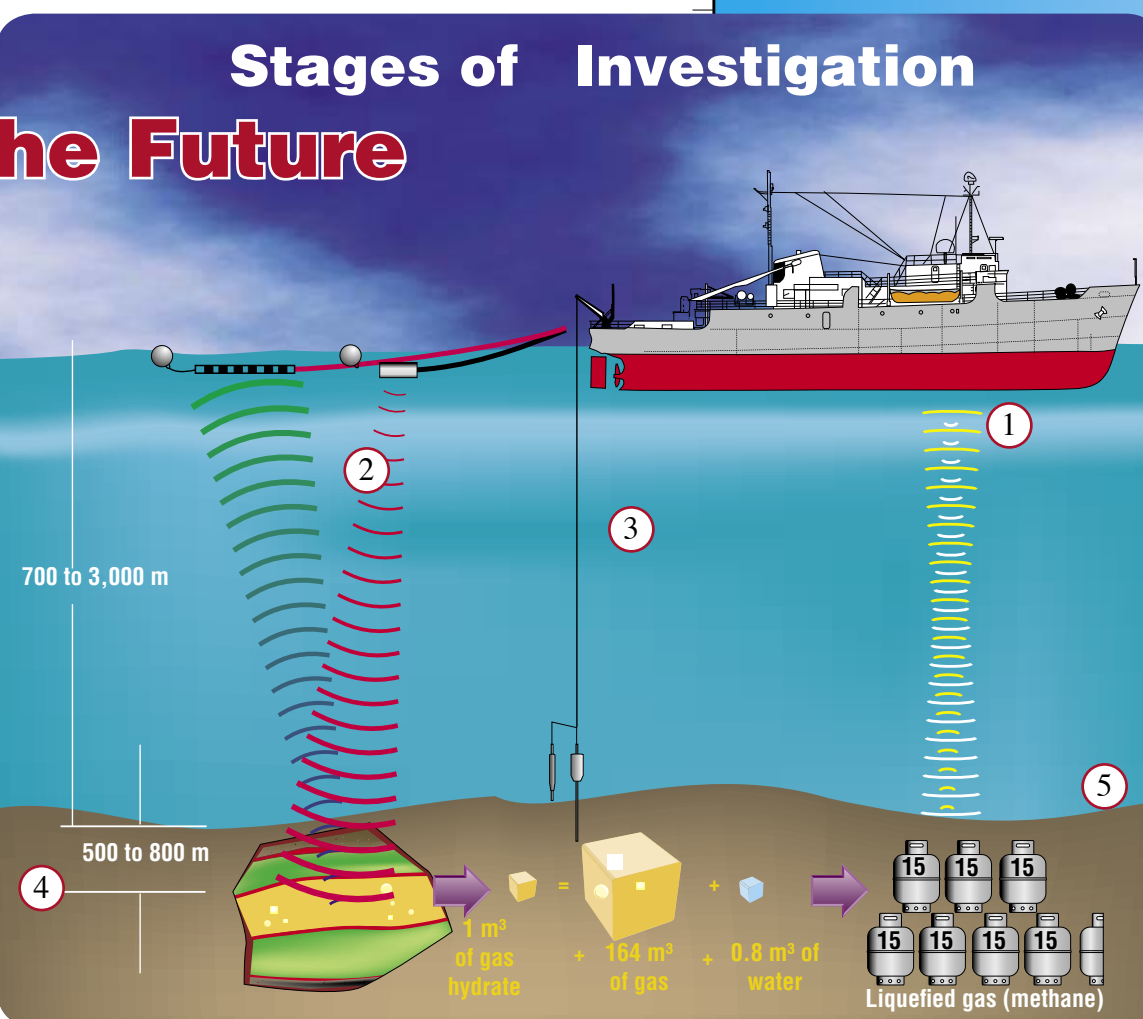
The oceanographic ship, "Vidal Gormaz", of the Chilean Navy has played vital role in carrying out this research.

Valuable discovery

During the first two oceanographic campaigns, carried out on board the "Vidal Gormaz" between parallels 32° and 40° latitude south, some indirect evidence of the presence of gas hydrates was found, which motivated the NRT of the United States to finance a third campaign, carried out in October 2004.

These new studies took place between the edge of the continental shelf and the start of the maritime depression at depths from 200 to 5,000 metres and up to 150 kilometres from the coast.

This time, the first physical discoveries of gas hydrates were achieved. These have great relevance for Chile, which



currently depends on imports of natural gas and petroleum.

New Source of Energy

Gas hydrates have a solid form, quite similar to ice, made up of natural gas and water which are found in most oceanic beds throughout the world.

On a global scale, the two most important areas where you can find these hydrates, are the subsoils of the Arctic at a depth of several hundred metres and in the marine sediments of the continental borders, at depths from one to four kilometres as is the case in Chile where there are several areas of this continental margin.

Under conditions of normal pressure and temperature, the decomposition of one cubic metre of methane hydrate produces 164 cubic metres of gaseous methane and 0.8 cubic metres of water, this is equivalent to more than 100 kilograms of liquid gas.

